

Chemical Processing with Nadcap certification



[Applus+ Laboratories](#) has the capabilities and qualifications to offer a wide scope of certified chemical processing services. From acid-etch inspection, cleaning, and chemical processes, all these processes are controlled under its AS9100 and Nadcap certifications.

What does Nadcap chemical processing imply?

The long-term functionality of [aerospace](#) and defense parts can be ensured through chemical processing, a means to protect these components against harsh environmental conditions.

Administered by the Performance Review Institute (PRI), Nadcap establishes stringent requirements for chemical processing. This is a means to ensure that all critical component processing, safety requisites and tests can be carried out according to the highest aerospace standards.

Our Nadcap chemical processing implies that all aerospace and defense parts receive stringent and in-depth audits until the final inspection.

Applus+ Laboratories chemical processing services for the aerospace industry

There are a variety of chemical processing methods that can be applied to ensure the long-term durability of [aerospace and defense components](#), our experts can employ the following:

- Ultrasonic cleaning
- Vapor degreasing
- Citric-acid passivation
- Copper-sulphate testing
- Nitric-acid Passivation
- Pre-penetrant etching
- Humidity testing

Experts in Nitric-acid Passivation

Nitric-acid passivation is conducted post-fabrication. Conducted by our experts, through this crucial process we can improve the corrosion resistance of a material such as stainless steel.

The process itself consists of two steps, the first being to use acid to remove iron from the surface of the material and the second being to use an oxidizer to convert surface metal to an oxide form. This creates a layer that protects against outside corrosion.

Experts in Pre-penetrant etching

Also known as 'material smearing', pre-penetrant etching refers to a non-destructive inspection process that lightly removes a very fine layer of the material in question to allow for inspection. The process includes adding either a caustic solution or an acid to a material to remove around 0.0025mm (0.0001") to 0.005mm (0.0002") of the surface layer.

Through this process, we allow inspectors to evaluate the grain structure of the material for any problems that may have been previously masked.

Benefits of choosing Applus+ Laboratories for chemical processing with Nadcap certification

Applus+ Laboratories has the capability and qualifications to perform certified chemical-processing services along with its Nadcap-accredited non-destructive testing services. This includes citric-acid passivation, copper-sulphate testing, nitric-acid passivation and pre-penetrant etching on [aerospace components](#) thanks to our Nadcap accreditation.

Thanks to the help of its [Applus+ XRI](#) clean, efficient facilities, specifically designed to process aerospace components, we can offer clients one point of contact for chemical processing. This allows customers to save the time and money it takes to transport their materials to diverse service providers.